WE CLAIM:

1. A method of inducing proliferation of bone marrow cells and their progeny, comprising contacting said cells with Bv8.

2. The method of claim 1, wherein said contacting is with BV8 in combination with EG-VEGF.

3. The method of claim 1, wherein said bone marrow cells are hematopoietic stem cells.

4. The method of claim 1, wherein said bone marrow cells are myeloid progenitor cells.

5. The method of claim 1, wherein said bone marrow cells are myeloid precursor cells.

6. The method of claim 1, wherein said bone marrow cells are neutrophils.

7. A method for inducing proliferation of lymphoid lineage progenitor cells and their progeny, comprising contacting said cells with Bv8, EG-VEGF, or a combination thereof.

8. The method of claim 7, wherein said progeny are lymphoid precursor cells.

9. The method of claim 7, wherein said progeny are lymphocytes.

10. The method of claim 7, wherein said progeny are B cells.

11. The method of claim 7, wherein said progeny are T cells.

12. A method for treating a disorder associated with abnormal hematopoiesis in a mammal, comprising administering to said mammal a Bv8 antagonist, EG-VEGF antagonist, or a combination thereof.

13. The method of claim 12, wherein the disorder is a hematological disorder.

14. The method of claim 13, wherein the hematological disorder is leukemia, myeloproliferative disorder, myelodysplastic disorder, lymphoproliferative disorder, or lymphodysplastic disorder.

15. The method of claim 14, wherein the leukemia is acute myeloid leukemia, chronic myelogenous leukemia, or acute lymphoblastic leukemia.

16. A method for treating an immunodeficiency disorder in a mammal, comprising administering to said mammal Bv8, EG-VEGF, or a combination thereof.

17. The method of claim 16, wherein the immunodeficiency disorder is a primary immunodeficiency disorder.

18. The method of claim 16, wherein the immunodeficiency disorder is a B lymphocyte disorder.

19. The method of claim 16, wherein the immunodeficiency disorder is a T lymphocyte disorder.

20. The method of claim 16, wherein the immunodeficiency disorder is a secondary immunodeficiency disorder.

21. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with chemotherapy.

22. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with chemotherapy treatment with 5 fluorouracil, vincristine, cisplatin, oxoplatin, methotrexate, 3'-azido-3'-deoxythymidine, paclitaxel, doxetaxel, an anthracycline antibiotic, or mixtures thereof.

23. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with an infectious disease.

24. The method of claim 16, wherein the immunodeficiency disorder is associated with human immunodeficiency virus (HIV) infection.

25. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with leukemia, myeloproliferative disorder, or myelodysplastic disorder.

26. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with the administration of an immunosuppressive agent.

27. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with administration of radiation.

28. The method of claim 16, wherein the immunosuppressive agent is a therapeutic agent having a secondary immunosuppressive effect.

29. The method of claim 16, wherein the immunodeficiency disorder is a condition associated with administration of 5 fluorouracil, vincristine, cisplatin, oxoplatin, methotrexate, 3'-azido-3'-deoxythymidine, paclitaxel, doxetaxel, an anthracycline antibiotic, or mixtures thereof.

30. A method for inducing proliferation of B lymphocytes, comprising contacting said lymphocytes with Bv8, EG-VEGF, or a combination thereof.

31. A method for inducing proliferation of T lymphocytes, comprising contacting said lymphocytes with Bv8, EG-VEGF, or combination thereof.

32. The method of claim 31, wherein the T lymphocytes are CD4+ T lymphocytes.

33. A method for treating neutropenia in a mammal, comprising administering to said mammal Bv8, EG-VEGF, or a combination thereof.

34. The method of claim 33, wherein the neutropenia is a condition associated with an infectious disease.

35. The method of claim 33, wherein the neutropenia is associated with a bacterial infection.

36. The method of claim 33, wherein the neutropenia is a condition associated with the administration of an immunosuppressive agent.

37. The method of claim 36, wherein the immunosuppressive agent is a therapeutic agent having an immunosuppressive effect.

38. The method of claim 33, wherein the neutropenia is a condition associated with administration of radiation.

39. The method of claim 33, wherein the neutropenia is a condition associated with chemotherapy.

40. The method of claim 33, wherein the neutropenia is a condition associated with administration of 5 fluorouracil, vincristine, cisplatin, oxoplatin, methotrexate, 3'-azido-3'-deoxythymidine, paclitaxel, doxetaxel, an anthracycline antibiotic, or mixtures thereof.

41. A method for treating lymphopenia in a mammal, comprising administering to said mammal Bv8, EG-VEGF, or a combination thereof.

42. A method for treating an autoimmune disorder in a mammal, comprising administering to said mammal a Bv8 antagonist, EG-VEGF antagonist, or combination thereof.

43. The method of claim 42, wherein the autoimmune disorder is inflammatory bowel disease.

44. The method of claim 42, wherein the autoimmune disorder is Crohn's disease or colitis.

45. The method of claim 42, wherein the autoimmune disorder is lupus, multiple sclerosis, myasthenia gravis, optic neuritis, psoriasis, rheumatoid arthritis, Graves Disease, autoimmune hepatitis, type I diabetes, or aplastic anemia.

46. An article of manufacture comprising:

a container;

a Bv8 antagonist, EG-VEGF antagonist, or combination thereof;

instructions for using the Bv8 antagonist, EG-VEGF antagonist, or combination thereof to treat hematological disorders.

47. An article of manufacture, comprising:

a container,

Bv8, EG-VEGF, or a combination thereof, and

instructions for using the Bv8, EG-VEGF, or combination thereof to treat neutropenia.

48. An article of manufacture comprising:

a container;

Bv8, EG-VEGF, or a combination thereof; and

instructions for using the Bv8, EG-VEGF, or combination thereof to treat a condition that is associated with abnormal hematopoiesis.

49. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 is a native sequence Bv8 polypeptide.

50. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 is a native human Bv8 polypeptide.

51. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 comprises the amino acid sequence of SEQ ID NO: 2.

52. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 comprises the amino acid sequence of SEQ ID NO: 4.

53. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 comprises the amino acid sequence of SEQ ID NO: 6.

54. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 binds heparin.

55. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 is a Bv8 immunoadhesin.

56. The method of any one of claims 1-11, 16-41, 47, or 48, wherein said Bv8 is chimeric Bv8.

57. The method of any one of claims 2, 16-41, 47, or 48, wherein said EG-VEGF is a native sequence EG-VEGF polypeptide.

58. The method of any one of claims 2, 16-41, 47, or 48, wherein said EG-VEGF is a native human EG-VEGF polypeptide.

59. The method of any one of claims 2, 16-41, 47, or 48 , wherein said EG-VEGF comprises the amino acid sequence of SEQ ID NO:8.

60. The method of any one of claims 2, 16-41, 47, or 48, wherein said EG-VEGF comprises the amino acid sequence of SEQ ID NO:10.

61. The method of any one of claims 2, 16-41, 47, or 48, wherein said EG-VEGF is an EG-VEGF immunoadhesin.

62. The method of any one of claims 2, 16-41, 47, or 48, wherein said EG-VEGF is chimeric EG-VEGF.

63. The method of any one of claims 12, 16, 33, 41, or 42, wherein said mammal is a human.

64. The method of any one of claims12-15 or 42-46, wherein the antagonist is an antibody, small molecule, soluble receptor, or oligonucleotide.

65. The method of claim 64, wherein the antibody is polyclonal.

66. The method of claim 64, wherein the antibody is monoclonal.

67. The method of claim 64, wherein the antibody is humanized.

68. The method of claim 64, wherein the antibody is chimeric.

69. The method of claim 64, wherein the antibody is a Fab, Fab', $F(ab')_2$, or Fv fragment.

70. The method of claim 64, wherein the soluble receptor is Bv8/EG-VEGF receptor-1.

71. The method of claim 64, wherein the soluble receptor is Bv8/EG-VEGF receptor-2.